

## **REMARKS/ARGUMENTS**

Applicants have received the Final Office Action dated April 1, 2008 (hereinafter "Office Action"), wherein: 1) claims 1, 8, 12, 21, 25, 27, 31, 40, 46, 50, 59, 65, 69 and 78-95 were objected to due to informalities;<sup>1</sup> 2) the drawings were objected to as failing to comply with the requirements of 37 CFR 1.84(p)(5); 3) claims 78-95 were rejected under 35 U.S.C § 101 as allegedly directed to non-statutory subject matter; and 4) claims 1-15, 17-34, 36-53, 55-72 and 74-95 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Valdevit et al. (U.S. Pub. Pat. App. No. 2002/0156918, hereinafter "Valdevit"). Applicants have amended claims 1, 8, 12, 21, 25, 27, 31, 40, 46, 50, 59, 65, 69 and 78-95. Based upon the amendments and arguments presented herein, Applicants respectfully submit that all claims are in condition for allowance.

### **I. THE CLAIM OBJECTIONS**

Claims 1, 8, 12, 21, 27, 31, 40, 46, 50, 59, 65, 69, 78, 84, 92 and 95 were objected to due to the recitation of the phrase "so as," which the Examiner suggested deleting.<sup>2</sup> Applicants thank the Examiner for the suggestion, which has been incorporated into each of the claims.

Claims 21, 40 and 59 were objected to due to the recitation of the term "capability," which the Examiner suggested deleting.<sup>3</sup> Applicants again thank the Examiner for the suggestion, which has been incorporated into claim 21. With regard to claims 40 and 59, Applicants respectfully note that the term "capability" (and related text) had already been deleted in the Amendment previously submitted by Applicants.

Claim 25 was objected to due to the recitation of the phrase "first said switch" in line 1, which the Examiner suggested amending to recited "said first switch."<sup>4</sup>

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<sup>1</sup> Applicants respectfully note that claims 78-95 were included in the list of claims that were objected to, but only objections to claims 78, 84, 86, 92 and 95 were specifically addressed in the body of the Office Action. Applicants could not find any of the described defects in the remaining claims listed as objected to, and Applicants have thus assumed that the inclusion of claims 79-83, 85, 87-91 and 93-94 was a typographical error in the Office Action.

<sup>2</sup> See Office Action, ¶ 3, p. 2.

<sup>3</sup> See Office Action, ¶ 3, p. 2.

<sup>4</sup> See Office Action, ¶ 3, p. 2.

Applicants again thank the Examiner for the suggestion, which has been incorporated in the claim.

Applicants respectfully submit that the above-described amendments fully address each of the objections to the claims raised in the Office Action, and thus respectfully request withdrawal of the objections.

## **II. THE DRAWING OBJECTION**

The drawings were objected to for failing to comply with 37 CFR 1.84(p)(5) due to the inclusion of a reference numeral (322) in the Specification not shown in the drawings, and correction of the drawings was required.<sup>5</sup> Applicants respectfully note that the inconsistency between the drawings and the Specification was not due to an omission in the drawings, but instead due to an inadvertent typographical error in the Specification. Applicants have amended paragraph [0027] of the Specification to correctly recite “ports 306-321,” thus deleting the incorrect reference to port “322.” No new matter has been introduced by this amendment. Applicants respectfully submit that this amendment addresses the issue raised by the objection to the drawing, and Applicants thus respectfully request withdrawal of the objection.

## **III. THE STATUTORY SUBJECT MATTER OBJECTIONS**

Claims 78-95 were rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter, due to the recitation of the term “article,” specifically “An article comprising: a computer-readable storage medium...” in claims 78 and 92, and “The article of claim...” in claims 79-91 and 93-95.<sup>6</sup> Without conceding the merits of the rejection, Applicants have amended these claims in order to expedite prosecution of the subject Application. Independent claims 78 and 92 have been amended to require “A computer-readable storage medium...,” and dependent claims 79-91 and 93-95 have been amended to require “The computer-readable storage medium of claim ....” Applicants

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<sup>5</sup> See Office Action, ¶ 4, p. 3.

<sup>6</sup> See Office Action, ¶ 5, p. 4.

respectfully submit that the amended claims are directed to statutory subject matter,<sup>7</sup> and further respectfully submit that the amendments do not alter the original intended scope of the claims. Applicants thus respectfully request withdrawal of the rejections of claims 78-95 under 35 U.S.C. § 101.

#### IV. THE ANTICIPATION REJECTIONS

##### a. Independent claims 1, 21, 40, 59, 78 and 92

Regarding the rejections of independent claims 1, 21, 40, 59, 78 and 92 as allegedly anticipated by Valdevit under 35 U.S.C. § 102(b),<sup>8</sup> Applicants respectfully note that, in response to Applicant's prior arguments, it was alleged that "Figure 8A depicts three exit trunk groups 824(1), 824(2) and 824(3) and thus, satisfies the claim requirements."<sup>9</sup> Applicants respectfully traverse this characterization of the cited art, noting that the allegation represents a bare assertion without any objective supporting evidence, and further respectfully submitting that the Valdevit reference does not teach or even suggest the at least two trunk groups required by the claims.

Figure 8A of Valdevit shows four interconnected switches 812, 814, 816 and 818, which are coupled together in a manner analogous to that depicted in both Figures 2 and Figure 3A. As can be seen from both figures 2 and 3A, as well as from the description of each figure, each switch is represented by a box (e.g., switch 312 of Figure 3A), and each such switch includes smaller boxes indicative of ports within a given switch (e.g., port 324(1)). More specifically,

As seen in FIG. 2, switch 210-3,2 includes four E\_Ports, ports 226(1), 226(2), 226(3) and 226(4)), while switches 210-2,3 and 210-3,3 each has two E\_Ports, ports 226(5) and 226(6) and ports 226(7) and 226(8), respectively, and switch 210-3,3 includes three E\_Ports, ports 226(9), 226(10) and 226(11)... The above example is further illustrated in FIG. 3A. As shown, switches 312, 314, 316 and 318 are analogous to the Fibre

<sup>7</sup> See MPEP § 2106.01-I ("...a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.") (underlining added).

<sup>8</sup> See Office Action, ¶ 6, pp. 4-5.

<sup>9</sup> Office Action, ¶ 2, p. 2.

Channel switches 210-3,2, 210-2,3, 210-3,3 and 210-3,4 in FIG. 2, respectively. The various **ports** 322(1), 322(2), 322(3), 324(1), 324(2), 326, 328, 332, 334, 336(1), 336(2), 338(1), 338(2) and 338(3) also correspond to analogous ports shown in FIG. 2 as discussed in the example above.<sup>10</sup>

The switches depicted in Figure 3A are further shown in more detail in Figure 4, as noted in the description of Figure 4. Specifically,

FIG. 4 depicts a block diagram illustrating switch 400, which works suitably well with the described embodiments of the present invention to overcome the drawbacks associated with conventional static path routing of frames and to perform the load sharing optimizations in accordance with the present invention. For illustrative purposes, switch is shown with four E\_Ports, namely 402 and 404. Each E\_Port 402 and 404 includes an egress or transmit portion 426, 418 and an ingress or receive portion 412, 414. It will be apparent to those skilled in the art that any number of E\_Ports may reside on a switch as determined by the hardware constraints of the particular switch. It will be apparent to one skilled in the art that switch 400 is interchangeable with switch 312 in FIGS. 3A and 3B, although one less port is shown.<sup>11</sup>

Further, Figure 5B of Valdevit shows an example of a multiple field routing table, wherein the “egress ports” are listed as ports 324(1) and 324(2) for Domain Field of D\_ID 01, and ports 324(3), 324(4) and 324(5) for Domain Field of D\_ID 02. Applicants respectfully note that Valdevit teaches that the multiple fields of the routing table shown in Figure 5B “correspond to the multiple ports” in the local switch that lead to the predetermined paths....<sup>12</sup> Applicants additionally note that this same type of table is shown in Figure 8B, which corresponds to the ports and switches shown in Figure 8A,<sup>13</sup> including **ports** 824(1), 824(2) and 824(3).

Applicants respectfully submit that it is clear, from the discussion above, that items 824(1), 824(2) and 824(3) of Figure 8A are individual egress ports. Further,

<sup>10</sup> Valdevit, p. 4, lines 1-6 of ¶ [0043] and lines 1-8 of ¶ [0047] (emphasis added).

<sup>11</sup> Valdevit, p. 5, ¶ [0051] (emphasis added).

<sup>12</sup> Valdevit, p. lines 6-8 of ¶ [0056] (emphasis added).

<sup>13</sup> Compare the description of Figure 5B of Valdevit, p. 2, ¶ [0022] (“FIG. 5B is an illustration of a multiple-field routing table included in the embodiment of FIG. 4.”) with the description of Figure 8B of Valdevit, p. 2, ¶ [0027] (“FIG. 8B illustrate an example multiple-field routing table entry corresponding to the embodiment of FIG. 8A.”).

Applicants respectfully submit that it would be clear to one of ordinary skill in the art that each trunk group required by the claims comprises multiple links and thus multiple ports on each switch.<sup>14</sup> Given that a trunk group comprises multiple ports, it is nonsensical to refer to a single port as a trunk group, or as any other type of group. For at least these reasons, Applicants respectfully submit that the three egress ports 824(1), 824(2) and 824(3) are not, and cannot be, analogous in any way to the at least two trunk groups required by the claims.

Applicants further respectfully note, as already noted in the response to the Prior Office Action, that of the four switches shown in Figure 8A of Valdevit (shown below),

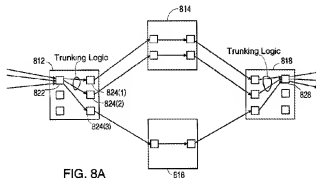


FIG. 8A

only two of the switches, 812 and 818, include trunk groups (see the “trunking logic” groupings of Figure 8A), and each of these two switches includes only a single trunk group. Additionally, only switch 812 includes “egress” or exit ports, and thus only switch

812 is a viable candidate switch, since the claims require “a set of possible exit ports” (emphasis added). But, as already stated, switch 812 only includes a single trunk group, which includes ports 824(1) and 824(2), as indicated by the circle labeled “trunking logic.” Port 824(3) is not contained in this circle, and the link connected to port 824(3) is not connected to switch 814. Thus, port 824(3) cannot be part of the trunk group together with ports 824(1) and 824(2). As there is only one link connecting switch 812 to switch

<sup>14</sup> See, e.g., Figure 3 and accompanying description at Specification, p. 3, lines 1-6 of ¶ [0026] (“Thus, FIG. 3 depicts a block diagram illustrating an embodiment of adjacent switches in which trunking is employed. In this particular embodiment, switches 302 and 304 are coupled together by a set of links, also referred to as inter-switch links or ISLs. In this embodiment, the links (and associated ports) comprise a trunked group 300.”) (emphasis added). See also Richard Barker & Paul Massiglia, *Storage Area Network Essentials*, 185 (2002) (“Switch vendors implement *trunking* technology to balance traffic among multiple links used to connect a pair of switches, making the use of these links transparent to applications and management tools.”) (italics in original; underlining added). Applicants have submitted relevant excerpts of the Barker and Massiglia reference in an Information Disclosure Statement filed concurrently with the present Response.

816, there cannot be a trunk group between these switches, as at least two parallel links are required to define a trunk group (as previously noted). Thus, it is clear that port 824(3) is not part of a trunk group. Applicants therefore respectfully submit that it would be evident to one of ordinary skill in the art that Figure 8A does not teach or even suggest the at least two trunk groups required by the claims.

At least because Valdevit does not teach or even suggest “said set of possible exit ports including at least some of the exit ports of at least two trunk groups,” as required by each of the independent claims, Applicants respectfully submit that Valdevit does not teach or suggest all of the limitations of any of the claims, and thus does anticipate the claims under 35 U.S.C. § 102(b). Applicants therefore respectfully submit that amended<sup>15</sup> independent claims 1, 21, 40, 59, 78 and 92, as well as those claims that respectively depend upon them, are all in condition for allowance.

b. Dependent claims 8, 12, 27, 31, 46, 50, 65, 69, 84, 86 and 95

Regarding the rejections of dependent claims 8, 12, 27, 31, 46, 50, 65, 69, 84, 86 and 95 as allegedly anticipated by Valdevit under 35 U.S.C. § 102(b),<sup>16</sup> Applicants respectfully note that arguments previously presented by Applicants in the response to the Office Action of October 15, 2007 (hereinafter “Prior Office Action”) regarding the rejections of these claims remain unaddressed. Applicants respectfully remind the Examiner that “Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant’s argument and answer the substance of it.”<sup>17</sup>

Reiterating the previously presented arguments regarding these claims, and again taking dependent claim 65 as exemplary, Applicants respectfully note that claim 65 requires the use of weights to select an exit port. The Office Action cites paragraphs [0063] and [0064] of Valdevit in support of the rejection, stating that these paragraphs

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<sup>15</sup> Applicants respectfully note that none of the amendments to the independent claims were in response to the anticipation rejections, and thus the arguments presented herein with regard to said anticipation rejections remain applicable to the claims as amended.

<sup>16</sup> See Office Action, ¶ 6, p. 6.

<sup>17</sup> MPEP § 707.07(f) (emphasis added).

teach the limitations of claim 65, including the aforementioned weights. Applicants again respectfully note that paragraph [0063] recites the use of a hash function, not weights, and paragraph [0064] describes the hash function in more detail, also never mentioning weights. Applicants further respectfully note that Valdevit teaches that “Because the hash function yields arbitrary, pseudo-random numbers, the data traffic is evenly distributed among the predetermined set of paths in a statistical sense.”<sup>18</sup> Applicants respectfully submit that one of ordinary skill in the art would recognize that the hash function (as well as the pseudo-random numbers generated by the hash function) used by Valdevit to randomly distribute the path selections is completely different from the weights used to select an exit port over alternative exit ports, as required by the claims. For at least these reasons, and in addition to the reasons already presented with regard to the independent claims upon which each of claims 8, 12, 27, 31, 46, 50, 65, 69, 84, 86 and 95 respectively depend, Applicants respectfully submit that Valdevit does not teach or even suggest all of the limitations of dependent claims 8, 12, 27, 31, 46, 50, 65, 69, 84, 86 and 95, and thus does not anticipate the claims under 35 U.S.C. § 102(b). Applicants therefore respectfully request withdrawal of the rejections of these claims.

c. Dependent claims 11, 15, 30, 32, 49, 53, 68, 72, 85 and 87

With regard to the rejections of dependent claims 11, 15, 30, 32, 49, 53, 68, 72, 85 and 87 as allegedly anticipated by Valdevit under 35 U.S.C. § 102(b),<sup>19</sup> Applicants respectfully note that arguments previously presented by Applicants in the response to the Prior Office Action regarding the rejections of these claims also remain unaddressed. Applicants again respectfully remind the Examiner of the obligation to address the substance of all arguments presented by Applicants. Applicants also reiterate the arguments presented in the response to the Prior Office Action with regard to these claims, noting that claim 68 (which depends upon claim 65 and which is used as an exemplary claim) requires that the weights at least in part reflect consumed bandwidth.

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<sup>18</sup> Valdevit, p.2, lines 5-7 of ¶ [0014] (emphasis added).

<sup>19</sup> See Office Action, ¶ 6, p. 6.

The Office Action again cites paragraph [0064], this time specifying lines 11-29. As noted above, paragraph [0064] only discusses hashes and does not mention weights in any manner, and further also does not mention bandwidth in any manner. Thus, the cited passage from Valdevit clearly does not mention that the weights at least in part reflect consumed bandwidth as required by claim 68. Applicants further respectfully submit that no passage within Valdevit teaches or even suggests all of the limitations of claim 68. For at least these reasons, and in addition to the reasons already presented with regard to those claims upon which claims 11, 15, 30, 32, 49, 53, 68, 72, 85 and 87 respectively depend, Applicants respectfully submit that dependent claims 11, 15, 30, 32, 49, 53, 68, 72, 85 and 87 are not anticipated by Valdevit under 35 U.S.C. § 102(b), and therefore respectfully request withdrawal of the rejections of these claims.

d. Dependent claims 17-20, 36-39, 55-58, 74-77 and 88-91

Regarding the rejections of dependent claims 17-20, 36-39, 55-58, 74-77 and 88-91 as allegedly anticipated by Valdevit under 35 U.S.C. § 102(b),<sup>20</sup> Applicants once again respectfully note that arguments previously presented by Applicants in the response to the Prior Office Action regarding the rejections of these claims also remain unaddressed. Applicants again respectfully remind the Examiner of the obligation to address the substance of all arguments presented by Applicants. Applicants also reiterate the arguments presented in the response to the Prior Office Action with regard to these claims, noting that all of these claims include operations based on source and/or destination tags added to the at least one frame. Some claims require exit port selection based on the tags, while other claims require stripping the tags.

The Office Action cites paragraph [0063] of Valdevit in support of the rejections of all of these claims. Paragraph [0063] mentions destination identifier D\_ID and source identifier S\_ID, but these are the source and destination addresses contained in the frames. They are not tags added to the frames and then stripped from the frames. Indeed, stripping the source and destination addresses would render the frames unroutable at the

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<sup>20</sup> See Office Action, ¶ 6, pp. 6-7.



next switch. Applicants thus respectfully submit that the S\_ID and D\_ID clearly do not correspond to the required source and/or destination tags. As a result, Valdevit does not teach or even suggest all of the limitations of claims 17-20, 36-39, 55-58, 74-77 and 88-91. For at least these reasons, and in addition to the reasons already presented with regard to those claims upon which claims 17-20, 36-39, 55-58, 74-77 and 88-91 respectively depend upon, Applicants respectfully submit that Valdevit does not anticipate these claims under 35 U.S.C. § 102(b), and therefore respectfully request withdrawal of the rejections of dependent claims 17-20, 36-39, 55-58, 74-77 and 88-91.

### **CONCLUSION**

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. Applicants believe that no extensions of time or fees are required, beyond those that may otherwise be provided in documents accompanying this response. Nonetheless, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Wong Cabello's Deposit Account No. 50-1922.

Respectfully submitted,

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